1st INTERNAL ASSESMENT, 2025

Course Name: - BPO **Semester:- 2nd year**

Paper Code:- BPO207

Paper Name :- Orthotics Science -II

Time - 1 Hr. per hour extra time 20 min for V.I. & examinees with writer. **Max Marks-20**

Instructions:

- The question paper consists of three sections namely 1,2,3 All sections are Compulsory.
- Section 1- Each question carries 1 mark. All questions are compulsory.
- Section 2- Answer any 2 out of 3 given questions in maximum 120 words. Each question carries 4 marks.

Section 3- Answer any 1 out of 2 given questions in maximum 250 words. Each question carries 8 marks.

1.

2. **Objective Questions (attempt all question)** **4x1 marks each**

a. Which statement is true concerning the subtalar joint?

i. In the open kinetic chain, movement occurs both distal and proximal to the STJ axis.

ii. CKC pronation is calcaneal eversion and talar adduction/PF.

iii. OKC pronation is calcaneal eversion, adduction, and DF.

iv. Pronation causes varus stresses at the knee.

b. It is used to control rotation & movement of the hip and must lie between ASIS & greater trochanter.

i. PELVIC BAND

ii. HIP JOINT

iii. ISCHIAL SEAT

iv. KNEE JOINT

c. _____, also known as Little's Disease is a static Encephalopathy = Brain Injury that is non-progressive disorder of posture and movement.

i.

ii. Cerebral Palsy

iii. CVA(Cerebro –Vascular Accidents)

iv. iii. Spina bifida

v. iv. Poliomyelities

d. This orthosis allows reciprocal fashion of walking. Flexion of one hip result into extension of other by means of cable linking two hip joints.

i.

ii. RGO

iii. HGO

iv. KO

v. HKAFO

3. **Short Notes(attempt any two question)** **2x4 marks each**

a. What is UCBL support?

b. Differentiate between UMN and LMN.

c. Explain main two patterns of deformities seen in LE. 4

4. Long Question(attempt any one question) **1x8 marks each**

a. What is Cerebral palsy and classify its type? Discuss in detail about the possible clinical sign, common deformities and treatment plan in cp. 7 1/2

b. Explain poliomyelitis and its orthotic management with suitable diagrams.

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2nd INTERNAL ASSESMENT, 2025

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2

1. Objective Questions (attempt all question) **4x1 marks each**

a. Which of the following are common indications for prescribing a KAFO?

i. Mild knee sprain

ii. Polio with quadriceps weakness

iii. Post-polio residual paralysis

iv. Spinal cord injury with lower limb involvement.

b. Which of the following are components of an RGO system?

I. Hip joint system

II. Knee lock mechanism

III. Ankle foot orthosis

IV. Abduction bar

c. Which of the following are common orthoses used in Cerebral Palsy (CP)?

I. AFO

II. KAFO

III. SWASH brace

IV. Cock-up splint

d. This orthosis allows reciprocal fashion of walking. Flexion of one hip result into extension of other by means of cable linking two hip joints.

i. RGO

ii. HGO

iii. KO

iv. HKAFO

2. Short Notes(attempt any two question) **2x4 marks each**

a. What is the role of gait analysis in the orthotic checkout process?

b. Name two materials commonly used in the fabrication of KAFO and state one advantage of each

c. Explain RGO.

3. Long Question(attempt any one question) **1x8 marks each**

a. Explain the prescription principles of Knee Orthoses (KO), Knee-Ankle-Foot Orthoses (KAFO), and Hip-Knee-Ankle-Foot Orthoses (HKAFO). Include indications and contraindications for each.

b. Discuss the design, function, and application of Reciprocating Gait Orthosis (RGO) and Advanced Reciprocating Gait Orthosis (ARGO). How do they benefit paraplegic patients?